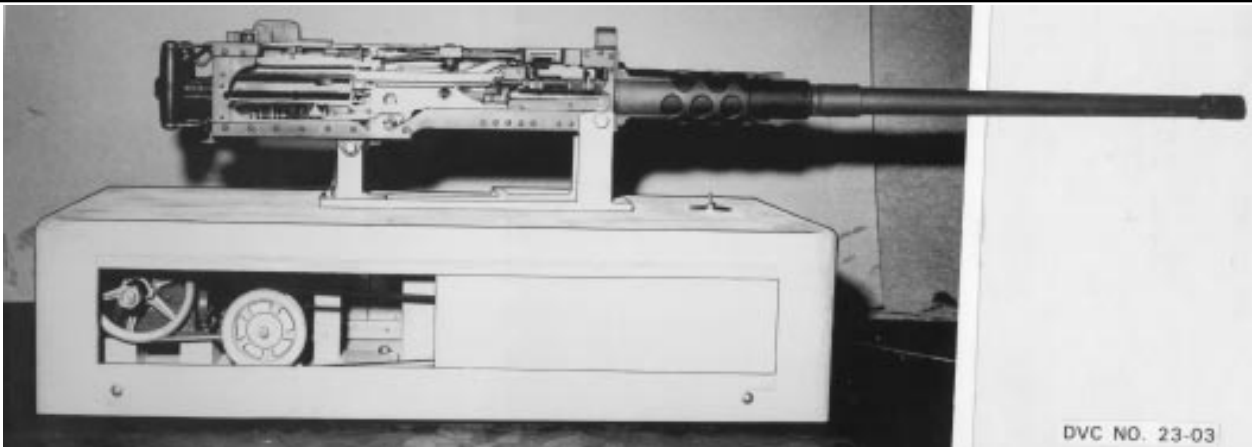


MOTORIZED SECTIONALIZED GUN .50 CALIBER, M2 MACHINE GUN



Training Category/Level Utilized:

Basic Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to demonstrate the cycle of operation of the .50 Caliber M2 Machinegun.

Functional Description:

The device is a motorized, sectionalized .50 caliber machinegun with sections cut out to expose important features for easy examination by students. The firing pin spring, oil buffer spring, and bolt driving spring have been shortened to reduce the force required to drive the device. Electric motors drive the gun through slow motion firing cycles (approximately seven times per minute) while dummy ammunition is fed into the breech mechanism, demonstrating clearly the interrelationship of the working parts. Dummy cartridges that have been ejected from the chamber fall into a compartment below the gun. Movement can be halted at any time with the motor switch, located on top of the cabinet,

enabling the instructor or student to point out the relative positions of various parts at any point in the firing cycle. The gun is mounted on a cabinet assembly containing a 1/3 HP 110 vac motor. Thirty dummy cartridges and links are furnished with each gun.

Physical Information:

54" x 24" x 24"; 175 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

110 vac

Applicable Publications:

Maintenance Handbook for DVC 23-03

Reference Publications:

TM 9-1005-213

Training Requirements Supported:

MOSC 11 Series

SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II FOR THE M1A1 TANK

**Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The SAWE MILES II M1/M1A1 System accurately, and in real time, simulates the effects of direct and indirect weapons fire, nuclear and chemical weapons, and mines as they would affect the Abrams tank and crew in combat. This allows realistic combat training without the hazards of live ammunition.

Functional Description:

The SAWE MILES II M1/M1A1 Abrams Tank System uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 105mm or 120mm main gun, the coax machine gun, and the M2 and M240 machine guns, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and MTGSD pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire on the using vehicle, and it has a high-visibility

Combat Vehicle Kill Indicator (CVKI) that signals others that the vehicle has received incoming direct or indirect fire.

An M1/M1A1 SAWE MILES II kit consists of: M2 and M240 Laser Transmitters, Combat Vehicle Kill Indicator (CVKI), Detector Belt system, Mine Effects Simulator (MES) Receivers, Blank Firing Adapters/Attachments, Global Positioning Satellite/Mission Control Station (GPS/MCS) Antenna, Hull to Turret Transmitter (HUTT), Man Worn Detector Device (MWDD), and Chemical Agent Alarm Simulator (CAAS). The SAWE MILES II M1/M1A1 system can operate safely at temperatures from -35 degrees C (-25 degrees F) to + 62 degrees C (+144 degrees F).

MAN WORN DETECTOR DEVICE (MWDD): The MWDD contains an adjustable cloth helmet harness containing an electronics module, and induction loop antenna, and four detectors. The Torso vest consists of a cloth and web assembly with pockets for magazines and grenades, a display console and audio alarm, an electronics module, a battery, eight laser detectors, a GPS antenna, an MCS receiver antenna, and a MES antenna.

PROTECTIVE MASK INTERFACE (PMI): The PMI (CAAS) is a simulator device that mounts between the M40 protective mask and its canister. It is a sealed, self-contained unit that contains a breathing sensor and a low frequency transmitter.

Physical Information:

Laser Transmitters:	Weight (Pounds)	Dimensions (inches)	Base Load (Rounds)	Standard Kill (Range) (Meters)
120 mm/Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	40/9900	200-2500/ 25-800
105 mm/Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	55/9900	200-2500/ 25-800
M2 Machine Gun	5.5	7.2 x 6.3 x 9.3	1200	25-800
M240 Machine Gun	5.5	5.25 x 3.0 x 6.3	600	25-800
Detector Assemblies:			Number of Detectors	
Belt Segment C(2)	2.6	116±2 x 2	6	
Belt Segment D	1.8	78±2 x 2	4	
Belt Segment E	2.06	194±2 x 2	4	
Man-Worn Helmet Harness	1.56	11.0 (diameter) x 3.5	5	
Man-Worn Torso Harness	2.81	40 x 7.75 to 18 x 2	8	
Equipment:				
CVKI	11.62	14 x 7.3 (diameter) without adapter		
SAWE MILES II Console	9.2	9.5 x 6.0 x 5.5 without adapter		
Remote Display Assembly	0.2	4 x 3.4 x 1.4 without adapter		
Battery Box	1.31	7 x 5 x 4		
GPS/MCS Antenna	2.0	7 x 7 x 1.5 without adapter		
HUTT	0.7	4 x 4 x 2		
Radio Control Device	1.5	5 x 5 x 3		
SAT/SAW	5.50	4 x 3.2 x 3.6		
PMI	PMI is approximately the size and shape of the M8A1 Chemical Agent Alarm.			

Equipment Required, Not Supplied:

Hoffman Device
 Battery, Lithium, 12V (80058) BA-5590/U
 Battery, Alkaline, 6V(2) (80058) BA-5200/U
 Battery, Alkaline, 9V (90058) BA-3090/U
 Small Arms Alignment Fixture (SAAF)
 Blank-Fire Attachment (BFA) M19
 Blank-Fire Attachment (BFA) M21

Applicable Publications:

TM 86-90-0

Reference Publications:

FM 21-11
 DA PAM 738-750
 SB 11-6
 TM 9-1005-213-10
 TM 9-1005-313-10
 TM 9-1005-314-12&P
 TM 9-1005-316-12&P
 TM 9-1005-265-12&P
 TM 9-2350-255-10
 TM 9-2350-264-10

Special Installation Requirements:

None

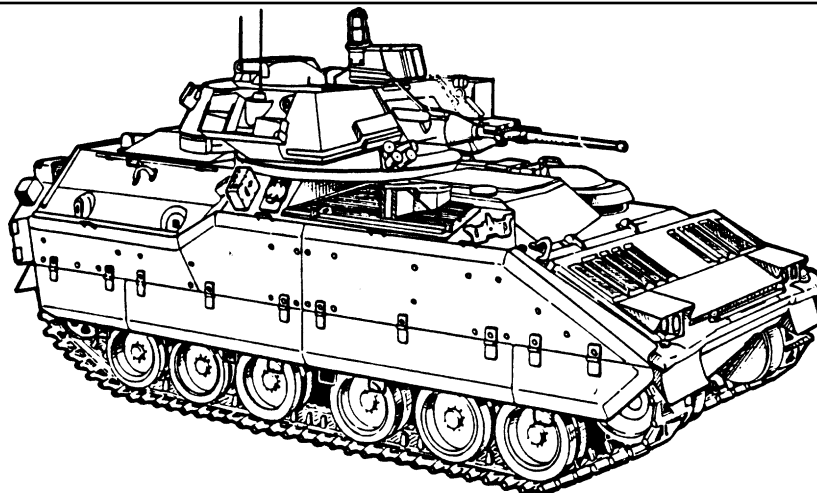
Power Requirements:

M1/M1A1 - 24VDC vehicle power or 12VDC external
 (battery box)
 Console - Battery, Alkaline, 6V(2) (80058) BA-5200/U
 MWDD - Battery, Lithium, 12V (80058) BA-5590/U (Approximately 100 hours of power or 4 days of normal use.)
 Battery, Alkaline, 9V (90058) BA-3090/U (Approximately 100 hours of power or 4 days of normal use.)

Training Requirements Supported:

ARTEPs Supported
 7-15, 17-55, 71-2
 MOSC 19k, 12 Series

SIMULATED AREA WEAPON EFFECTS (SAWE) MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II FOR THE M2/M3 BRADLEY FIGHTING VEHICLE (BFV)

**Training Category/Level Utilized:**

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:

The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M2/M3 Bradley Fighting Vehicle (BFV) simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the four sides of the turret detect incoming direct fire and send the signals to the console for interpretation. The commander, gunner, and driver wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the BFV contains the following components: TOW Laser Transmitter, Main Gun (25mm)/M240C Machine Gun Laser Transmitter, Detector Belt System, Combat Vehicle Kill Indicator, Mine Effects Simulator (MES) Receiver, Global Positioning System/Mission Control Station Antenna, Flashwess or AWESS,

Tow Tube Simulator, Hull-To-Turret Transmitter, Cables, Coax Machine Gun Microphone, Console, Battery Box, Remote Display Assembly, Radio Control Device, and Man Worn Detection Devices.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

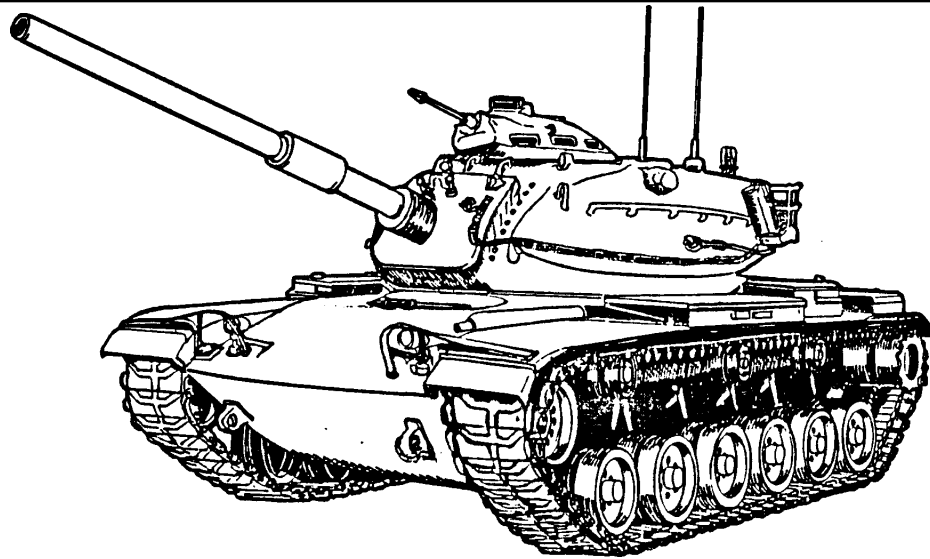
Reference Publications:

(Information not available)

Training Requirements Supported:

(Information not available)

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE M60A1/A3 TANK**



Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
(Information not available)

Purpose of Trainer:
To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:
The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M60A1/A3 Tank simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the four sides of the turret detect incoming direct fire and send the signals to the console for interpretation. The commander, gunner, and loader wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the M60A1/A3 Tank contains the following components: M85 Laser Transmitter,

Detector Belt System, Combat Vehicle Kill Indicator, Mine Effects Simulator Receiver, Blank Firing Adapters, Global Positioning System/Mission Control Station Antenna, Hull-To-Turret Transmitter, Cables, Console, Battery Box, Remote Display Assembly, Main Gun/Coax Machine Gun Transmitter, Coax Machine Gun Microphone, Radio Control Device, and Man Worn Detection Devices.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

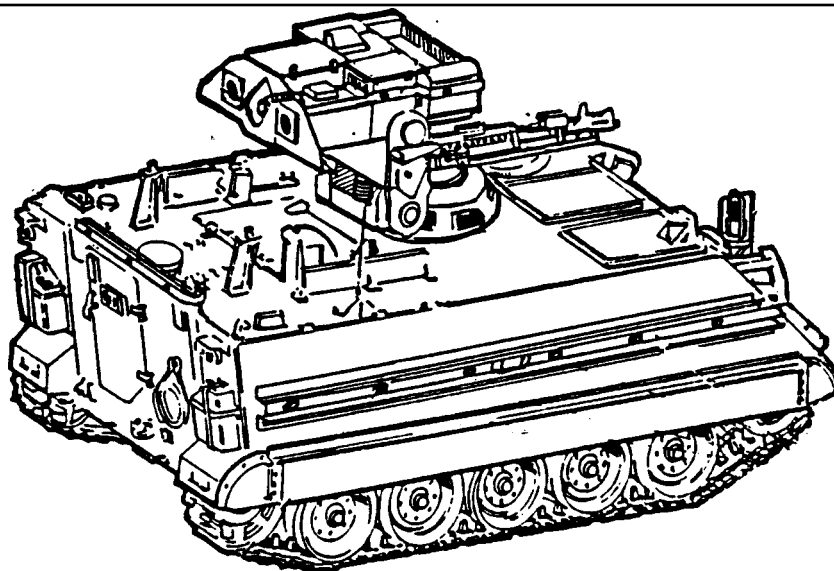
Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

**SIMULATED AREA WEAPON EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE M901 IMPROVED TOW VEHICLE (ITV)**

**Training Category/Level Utilized:**

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:

The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M901 Improved TOW Vehicle (ITV) simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the vehicle detect incoming direct fire and send the signals to the console for interpretation. The commander, driver, and infantrymen wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the M901 ITV contains the following components: Combat Vehicle Kill Indicator,

Mine Effects Simulator Receiver, M60 Laser Transmitter, Detector Belt System, Global Positioning System/Mission Control Station Antenna, TOW Transmitter, TOW Missile Simulator, Missile Guidance Set Simulator, ITV Interface, Cables, Console, Battery Box, Radio Control Device, and Man Worn Detection Devices.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

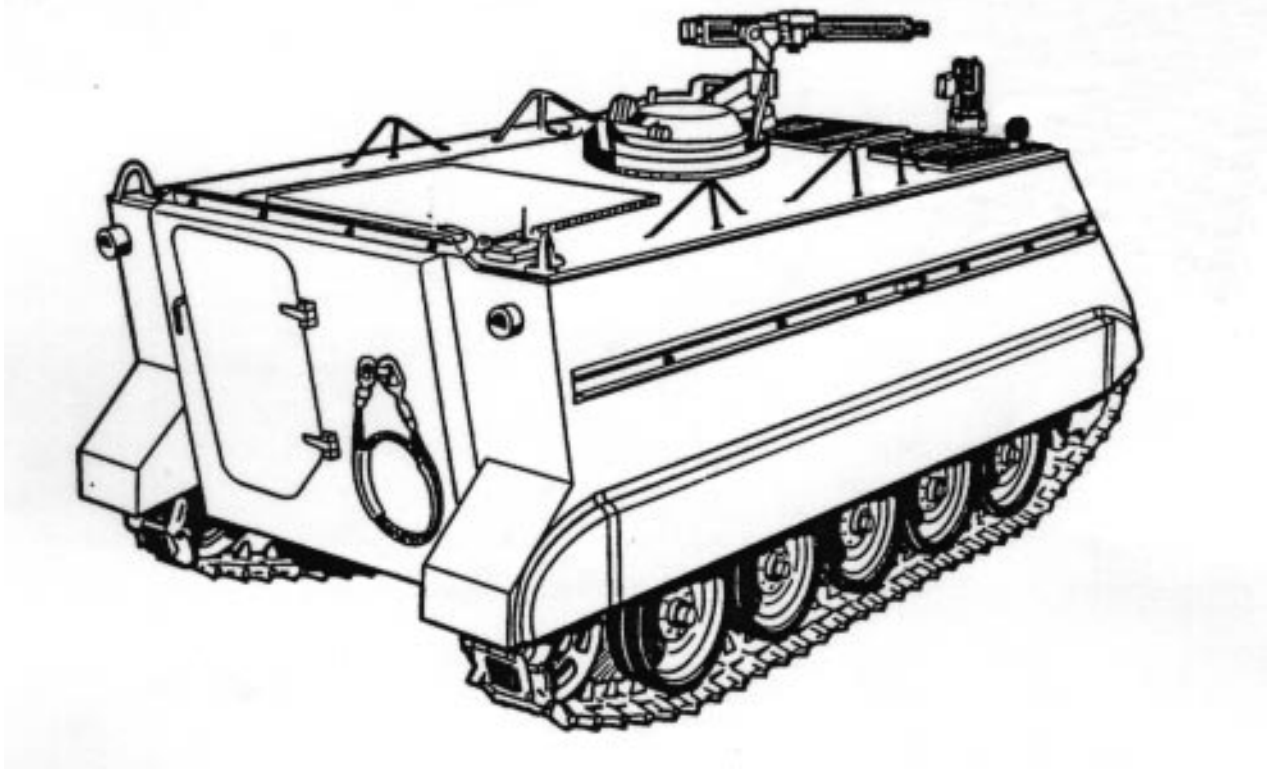
Reference Publications:

(Information not available)

Training Requirements Supported:

(Information not available)

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE M113 ARMORED PERSONNEL CARRIER (APC)**



Training Category/Level Utilized:
(Information not available)

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
(Information not available)

Purpose of Trainer:
To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:
The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M113 Armored Personnel Carrier (APC) simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the vehicle detect incoming direct fire and send the signals to the console for interpretation. The commander, driver, and infantrymen wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the M113 APC contains the following components: Combat Vehicle Kill Indicator, Mine Effects Simulator Receiver, M2 Laser Transmitter, Detector Belt System, Global Positioning System/Mission Control Station Antenna, Cables, Console, Battery Box, Radio Control Device, and Man Worn Detection Devices.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

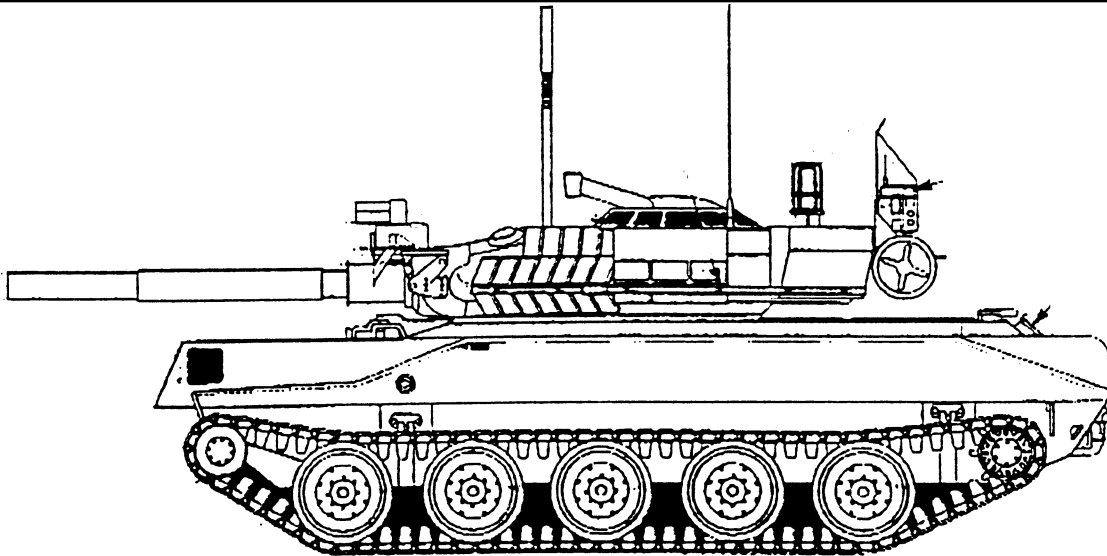
Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
(Information not available)

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE T72/T80 TANK**

**Training Category/Level Utilized:**

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:

The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) system for the T72/T80 Tank simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the vehicle detect incoming direct fire and send the signals to the console for interpretation. The commander, driver, and loader wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the T72/T80 Tank contains the following components: M2 Laser Transmitter, Detector

Belt System, Combat Vehicle Kill Indicator, Mine Effects Simulator Receiver, Blank Firing Adapters, Global Positioning System/Mission Control Station Antenna, Hull-To-Turret Transmitter, Cables, Console, Battery Box, Remote Display Assembly, Main Gun/Coax Machine Gun Transmitter, Radio Control Device, and Man Worn Detection Devices.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

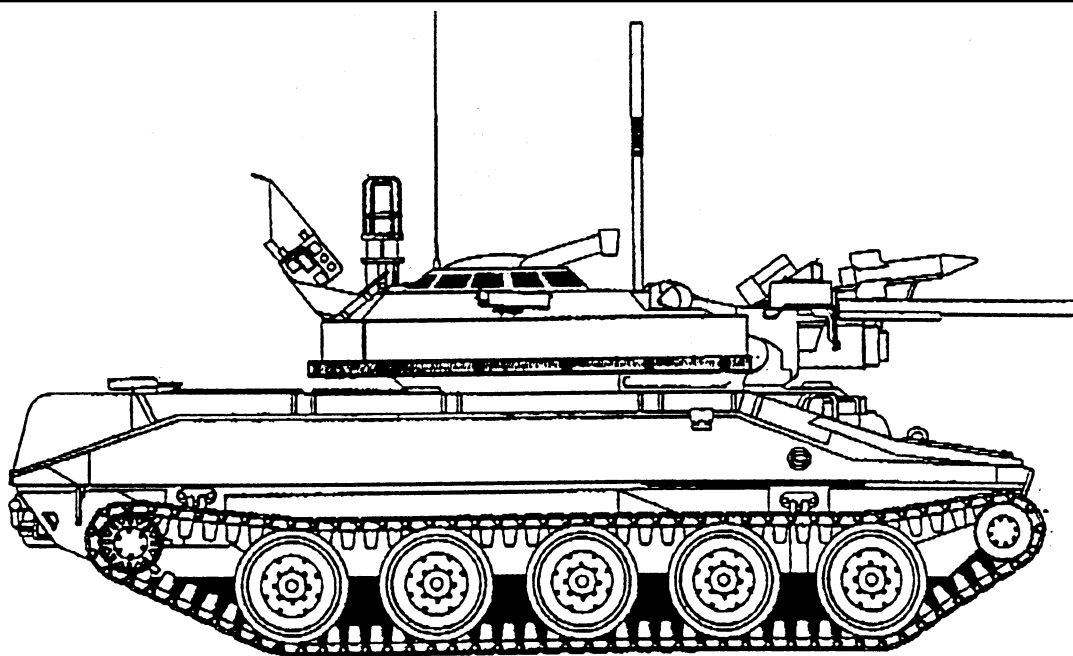
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Training Requirements Supported:

(Information not available)

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**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE BMP (M551) TANK**

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The SAWE MILS II BMP Armored Fighting Vehicles M551 System accurately, and in real time, simulates the effects of direct and indirect weapons fire, nuclear and chemical weapons, and mines as they would affect the Abrams tank and crew in combat. This allows realistic combat training without the hazards of live ammunition.

Functional Description:

The SAWE MILES II M1/M1A1 Abrams Tank System uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 105mm or 120mm main gun, the coax machine gun, and the M2 and M240 machine guns, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and MTGSD pyrotechnic charges add realism to weapon. The system detects all opposing fire, identifies opposing

weapons and Player ID, and determines the effect of incoming on the using vehicle, and it has a high-visibility Combat Vehicle Kill Indicator (CVKI) that signal others that the vehicle has received incoming direct or indirect fire.

An M1/M1A1 SAWE MILES II kit consists of: M2 and M240 Laser Transmitters, Combat Vehicle Kill Indicator (CVKI), Detector Belt system, Mine Effects Simulator (MES) Receivers, Blank Firing Adapters/Attachments, Global Positioning Satellite/Mission Control Station (GPS/MCS) Antenna, Hull to Turret Transmitter (HUTT), Man Worn Detector Device (MWDD), and Chemical Agent Alarm Simulator (CAAS). The SAWE MILSE II M1/M1A1 system can operate safely at temperatures from -35 degrees C (-25 degrees F) to +62 degrees C (+144 degrees F).

MAN WORN DETECTOR DEVICE (MWDD): The MWDD contains an adjustable cloth helmet harness containing an electronics module, and induction loop antenna, and four detectors. The Torso vest consists of a cloth and web assembly with pockets for magazines and grenades, a display console and audio alarm, an electronics module, a battery, eight laser detectors, a GPS antenna, an MCS receiver antenna, and a MES antenna.

PROTECTIVE MASK INTERFACE (PMI): The PMI (CAAS) is a simulator device that mounts between the M40 protective mask and its canister. It is a sealed, self-contained unit that contains a breathing sensor and a low frequency transmitter.

Physical Information:

Laser Transmitters:	Weight (Pounds)	Dimensions (inches)	Base Load (Rounds)	Standard Kill (Range) (Meters)
152 mm/Missile/ Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	40/5/9900	200-2500/ 25-800
Detector Assemblies:			Number of Detectors	
Belt Segment K	1.8	78 ± 1 x 2		4
Belt Segment L	2.06	194 ± 2 x 2		16
Man-Worn Helmet Harness	1.56	11.0 (diameter) x 3.5		5
Man-Worn Torso Harness	2.81	40 x 7.75 to 18 x 2		8
Equipment:				
CVKI	11.62	14 x 7.3 (diameter) without adapter		
SAWE MILES II Console	9.2	9.5 x 6.0 x 5.5 without adapter		
Remote Display Assembly	0.2	4 x 3.4 x 1.4 without adapter		
Battery Box	1.31	7 x 5 x 4		
GPS/MCS Antenna	2.0	7 x 7 x 1.5 without adapter		
HUTT	0.7	4 x 4 x 2		
Radio Control Device	1.5	5 x 5 x 3		
Missile Tube Simulator	20.0	56 x 8.0 (diameter)		
Radio Control Device	1.5	5 x 5 x 3		
SAT/SAW	5.50	4 x 3.2 x 3.6		
PMI	PMI is approximately the size and shape of the M8A1 Chemical Agent Alarm.			

Equipment Required, Not Supplied:

Battery, Lithium, 12V (80058) BA-5590/U
 Battery, Alkaline, 6V(2) (80058) BA-5200/U
 Battery, Alkaline, 9V (90058) BA-3090/U
 Blank-Fire Attachment (BFA) M21, for 7.62mm Machine
 Gun M240

Applicable Publications:

TM 132-92-0

Reference Publications:

FM 21-11
 DA PAM 738-750
 SB 11-6

Special Installation Requirements:

None

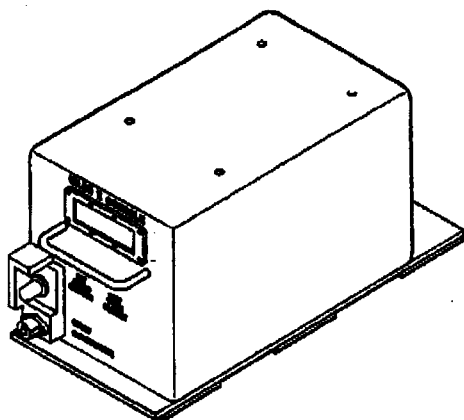
Training Requirements Supported:

ARTEPs Supported
 7-15, 17-55, 71-2
 MOSC 19D, 19E, and 19Z

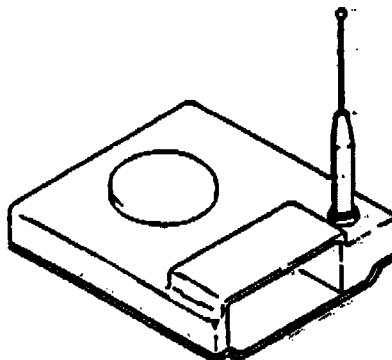
Power Requirements:

Battery, Lithium, 12V (80058) BA-5590/U
 Battery, Alkaline, 6V(2) (80058) BA-5200/U
 Battery, Alkaline, 9V (90058) BA-3090/U

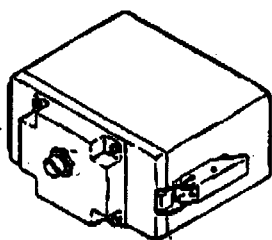
**SIMULATED AREA WEAPON EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE MOBILE INDEPENDENT TARGET SYSTEM (MITS)**



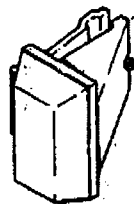
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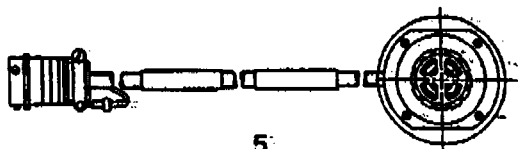
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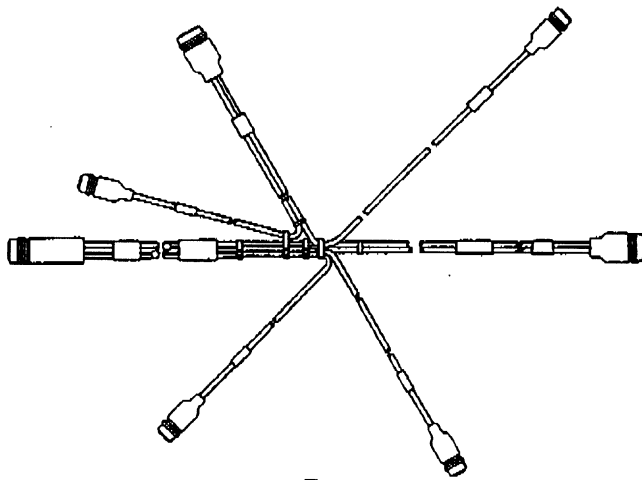
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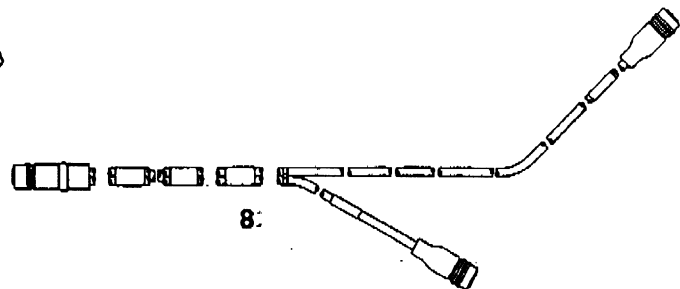
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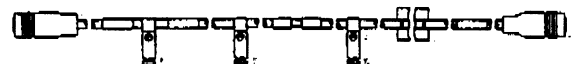
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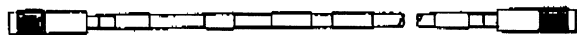
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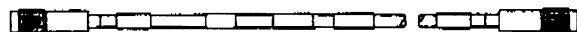
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12

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC.

Available Kits:

Armored Vehicle, Launched Bridge (AVLB)

D7F Tractor, Full-Track

Generators

*JD410 Backhoe

*MW24C Loader

M35A 2-1/2 Ton Cargo Truck

M88A1 Recovery Vehicle, Armored

M109A1 Howitzer, Medium Self-Propelled

M110A1 Howitzer, Heavy Self-Propelled

M151 Truck, Utility 1/4 Ton Jeep

*M250 Crane

M548 Carrier, Cargo, Full Tracked

M578 Recovery Vehicle, Light Armored

M728 Combat Engineer Vehicle (CEV)

M911 Truck, HET

M916 Truck, Tractor, Support Equipment Transport

M925 Truck, Cargo 5 Ton

M966 HMMWV TOW, 1-1/4 Ton

M977 Cargo Truck, 10 Ton

M968 HMMWV, Utility Truck, TON 1-1/4 Ton

M1008 Truck, Cargo, 1/4 Ton

M1009 Truck, Utility, 3/4 Ton

*Vehicles that use the Basic MITS Kits. See DVC 07-56/17.

Purpose of Trainer:

The SAWE MILES II MITS simulator lets you take part in realistic combat training exercises. The system permits computerized simulation of direct fire, nuclear or chemical weapons and mines as they would affect your equipment during actual combat.

Functional Description:

The console contains the electronics for the SAWE MILES II SYSTEM that replaces the ECU of the basic system.

The SAWE MILES II MITS system simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear and chemical events, and mine simulations sent from the Mission Control Station (MCS), a console that contains the computer that receives and interprets incoming fire signals.

For direct fire against the vehicle or equipment, a detector signals that a laser beam has hit. The console decodes the laser signal, identifies the weapon, and evaluates the possible damage that the weapon can have upon the particular type of vehicle or equipment. If it determines that the weapon would have "killed" or "damaged" the vehicle/equipment, the computer activates various devices to identify that the vehicle/equipment has been hit or killed. This information is also provided to the opposing force. These devices include CVKI or SDA, the Audio/visual Cue Device, if installed and the Audio Buzzer Assembly.

Indirect nuclear or chemical events, or mines, the MCS transmits an event message that signals to players the type of event, the type of ammunition being fired, and the location of the impact (or affected) area. The system console maintains an internal record of the location of receiving signals from overhead Global Positioning Satellites. When an indirect fire, nuclear, chemical, or mine event is signaled by the MCS, the console receives and decodes the signal. If the computer determines that you are within the target area, it then determines the effects of the incoming fire on the vehicle or equipment, and signals to the player and opposing force the effects of the fire. A NEAR MISS, a HIT, or a KILL, against using the CVKI or SDA, the Audio/Visual Cue Device, if installed and the Audio Buzzer Assembly.

In addition to the devices that visually or audibly indicate a NEAR MISS, HIT, or KILL to the vehicle or equipment, the console keeps a record of the events that have affected the vehicle equipment and displays this information on a display window on the front panel of the console. Like the MITS ECU, the console maintains a record of all these events during the course of an exercise, and the last 16 events can be "recalled" for display at any time.

A later version of the MITS is the Universal Detection System (Device 23-14A) that also has an expansion kit (Device 23-14A/1).

Physical Information:

Total system weight: 40.5
Battery Box
Buzzer Assembly, MITS
Cable Assembly, Interface Control MITS
Cable Assembly, System MITS
Plate Assembly, GPS/MCS Antenna
Cable Assembly, GPS Antenna
Cable Assembly, MCS Antenna
Cable Assembly, MES Receiver
Cable Assembly, A/V Cue
Cable Assembly, Battery Charger MITS
(Those items that are not identified as MITS are new
MILES SAWE II components.)

Equipment Required, Not Supplied:

Battery, Lantern type, 6V (4 ea) BA-200
Battery, Lantern type, 9V (1 ea) EN-522

Special Installation Requirements:

See TM 9-1265-379-10 Operator's Manual
Multiple Integrated Laser Engagement (MILES),
Simulator System, Laser, Mobile Independent
Target System (MITS)

Power Requirements:

Input: 24 vdc
Start-up Max Power: 24vdc at 1.2A=35VA
Nominal Power: 24vdc at .058A=1.4VA

Applicable Publications:

None

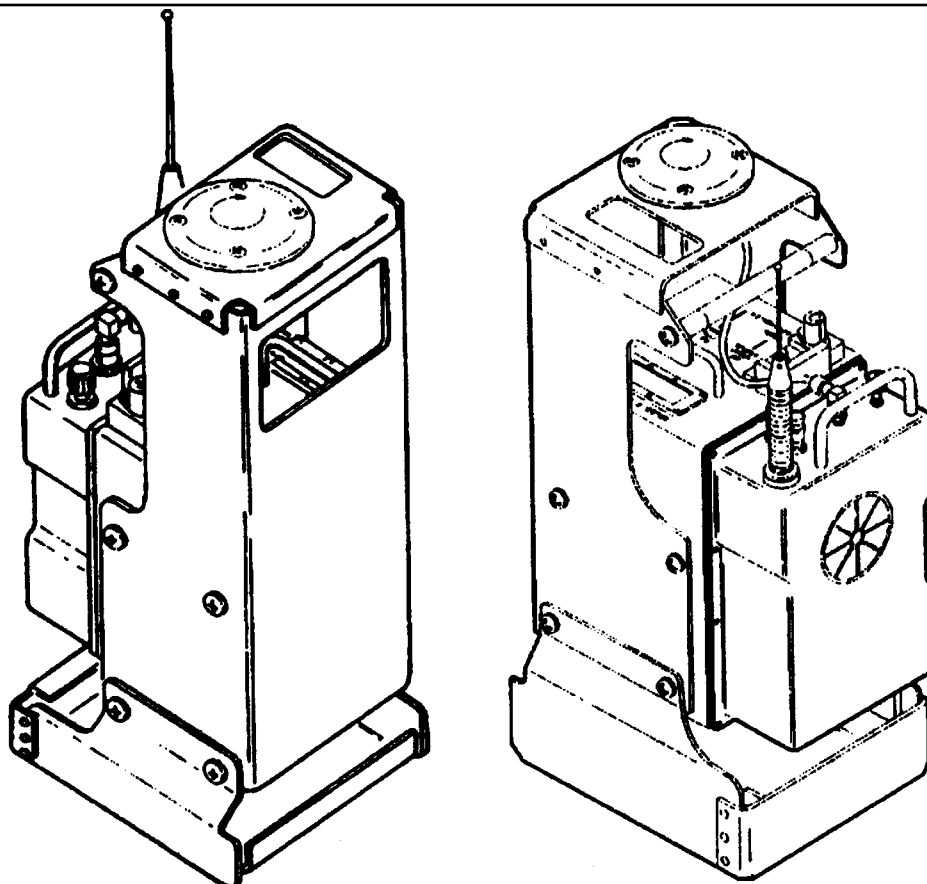
Reference Publications:

SD 133-90-0
TM 9-1265-379-10
SMM 1265-379-24&P

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2
MOSC 11B, 11Z, 19D, 19E, and 19Z
SM Tasks
All tactical task for skill levels 1 through 5.

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE CHEMICAL AGENT ALARM SIMULATOR (CASS)**

**Training Category/Level Utilized:**

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition. The Chemical Agent Alarm Simulator (CASS) simulates the M8A1 Chemical Agent Alarm.

Functional Description:

The CAAS is a sealed, self-contained unit powered by a 60 hour lithium battery. In a simulated chemical weapons attack, the CAAS senses two conditions: its location on the simulated battlefield using signals from global positioning satellites, and a chemical weapons "attack" by receiving radio signals from the mission control station. If the CAAS is located inside the casualty area during the simulated attack, the alarm will sound.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

(Information not available)

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE MINE EFFECTS SIMULATOR, ANTI-TANK**

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

(Information not available)

Power Requirements:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Applicable Publications:

(Information not available)

Functional Description:

(Information not available)

Reference Publications:

(Information not available)

Physical Information:

(Information not available)

Training Requirements Supported:

(Information not available)

**SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER
ENGAGEMENT SYSTEM (MILES) II FOR THE MINE EFFECTS SIMULATOR,
ANTI-PERSONNEL**

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

(Information not available)

Power Requirements:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Applicable Publications:

(Information not available)

Functional Description:

(Information not available)

Reference Publications:

(Information not available)

Physical Information:

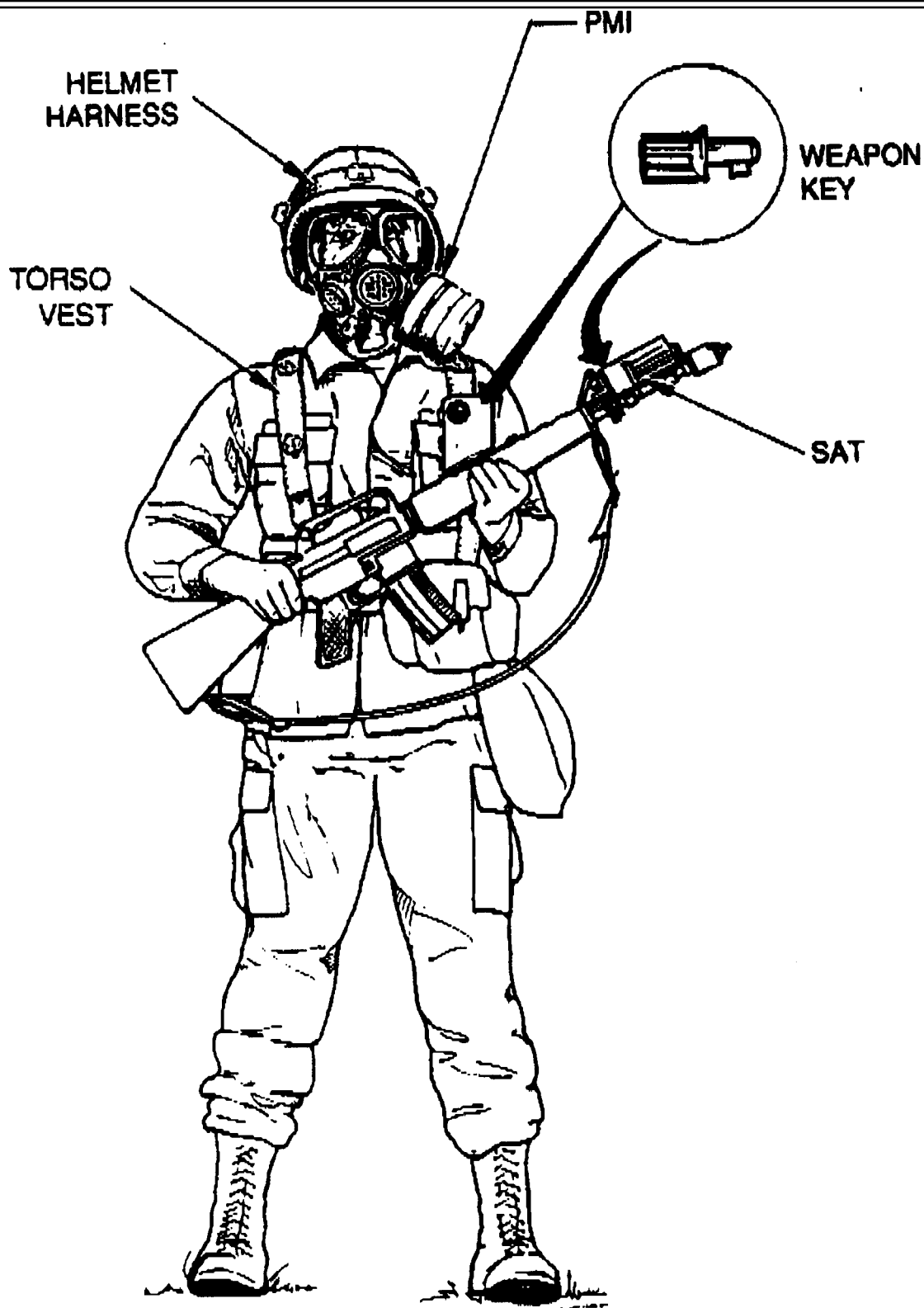
(Information not available)

Training Requirements Supported:

(Information not available)

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**SIMULATED AREA WEAPON EFFECTS (SAWE) MULTIPLE INTEGRATED LASER
ENGAGEMENT SYSTEM (MILES) II FOR THE M16A1/M16A2 RIFLE AND M249
SQUAD AUTOMATIC WEAPON (SAW), INSTRUMENTED, CMTC**



Training Category/Level Utilized:

Light Forces/Level 3

SAT/SAW - 5.50 lbs; 4 x 3.2 x 3.6

PMI is approximately the size and shape of the M8A1 Chemical Agent Alarm.

Logistic Responsible Command, Service, or Agency:

STRICOM

Equipment Required, Not Supplied:

Battery, Lithium, 12V (80058) BA-5590/U, MWDD

Battery, Alkaline, 9V (90058) BA-3090/U, SAT

Small Arms Alignment Fixture (SAAF)

Blank-Fire Attachment

M16A2 Ammunition, Blank

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The SAWE MILES II System accurately, and in real time, simulates the effects of direct and indirect weapons fire, nuclear and chemical weapons, and mines on personnel. This allows realistic combat training without the hazards of using live ammunition.

Special Installation Requirements:

None

Functional Description:

MAN WORN DETECTOR DEVICE (MWDD): The MWDD contains an adjustable cloth helmet harness containing an electronics module, and induction loop antenna, and four detectors. The Torso vest consists of a cloth and web assembly with pockets for magazines and grenades, a display console and audio alarm, an electronics module, a battery, eight laser detectors, a GPS antenna, an MCS receiver antenna, and a MES antenna.

SMALL ARMS TRANSMITTER (SAT): The MWDD uses eye-safe laser transmitters and is compatible with all other MILES training devices. It simulates firing capability of the weapon using normal firing procedures using blank fire to add realism. The system detects all opposing fire, identifies opposing weapons, and determines its effect on the soldier.

PROTECTIVE MASK INTERFACE (PMI): The PMI (CAAS) is a simulator device that mounts between the M40 protective mask and its canister. It is a sealed, self-contained unit that contains a breathing sensor and a low frequency transmitter.

Power Requirements:

MWDD - Battery, Lithium, 12V (80058) BA-5590/U (Approximately 100 hours of power or 14 days of normal use.)

Battery, Alkaline, 9V (90058) BA-3090/U (Approximately 100 hours of power or 7 days of normal use.)

Applicable Publications:

TM 84-90-0

Reference Publications:

FM 21-11

DA PAM 738-750

SB 11-6

TM 9-1005-249-10

TM 9-1005-319-10

TM 9-5860-436-14&P

Training Requirements Supported:

ARTEPs Supported

7-15, 17-55, 71-2

All MOSCs

Physical Information:

MWDD - Man-Worn Helmet Harness: 1.56 lbs; 11.0" (diam.) x 3.5 inches

MWDD - Man-Worn Torso Harness: 2.81 lbs; 40 x 7.75 to 18 x 2 inches

**SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER
ENGAGEMENT SYSTEM (MILES) II FOR THE M16A1/M16A2 RIFLE AND M249
SQUAD AUTOMATIC WEAPON (SAW), INSTRUMENTED, NTC/JRTC**

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

(Information not available)

Power Requirements:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Applicable Publications:

(Information not available)

Functional Description:

(Information not available)

Reference Publications:

(Information not available)

Physical Information:

(Information not available)

Training Requirements Supported:

(Information not available)

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M16A1/M16A2 RIFLE KIT



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K IWS, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons,

(with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the IWS. Transit Case dimensions: 46.3"L X 40.3"W X 17.5"H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
9vdc battery for the IWS vest

Applicable Publications:
Operator Manuals for IWS.
M16A2 23-6920-702-10,
M24 SWS 23-6920-702-10,
M249 SAW 23-6920-702-10,
M60 MG 23-6920-702-10,
M2 MG 23-6920-702-10

Reference Publications:
None

Training Requirements Supported:
ARTEPs 7-15, 17-55, 71-2
MOSCs 11B, 11Z, 19D, 19E, 19Z

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M249 SQUAD AUTOMATIC WEAPON KIT

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K IWS, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities



of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the IWS. Transit Case dimensions: 46.3"L X 40.3"W X 17.5"H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the IWS vest

Applicable Publications:

Operator Manuals for IWS.
M16A2 23-6920-702-10,
M24 SWS 23-6920-702-10,
M249 SAW 23-6920-702-10,
M60 MG 23-6920-702-10,
M2 MG 23-6920-702-10

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M24 SNIPER WEAPON SYSTEM KIT



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
STRICOM

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K IWS, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities



of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter, The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the IWS. Transit Case dimensions: 46.3"L X 40.3"W X 17.5"H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the IWS vest

Applicable Publications:

Operator Manuals for IWS.
M16A2 23-6920-702-10,
M24 SWS 23-6920-702-10,
M249 SAW 23-6920-702-10,
M60 MG 23-6920-702-10,
M2 MG 23-6920-702-10

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M60 MACHINE GUN KIT

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K IWS, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities



of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the IWS. Transit Case dimensions: 46.3"L X 40.3"W X 17.5"H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the IWS vest

Applicable Publications:

Operator Manuals for IWS.
M16A2 23-6920-702-10,
M24 SWS 23-6920-702-10,
M249 SAW 23-6920-702-10,
M60 MG 23-6920-702-10,
M2 MG 23-6920-702-10

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M240 MACHINE GUN KIT

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K IWS, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities



of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the IWS. Transit Case dimensions: 46.3"L X 40.3"W X 17.5"H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the IWS vest

Applicable Publications:

Operator Manuals for IWS.
M16A2 23-6920-702-10,
M24 SWS 23-6920-702-10,
M249 SAW 23-6920-702-10,
M60 MG 23-6920-702-10,
M2 MG 23-6920-702-10

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M113 ARMORED PERSONNEL CARRIER KIT

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (CVS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, or Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Kill causes continuous flashing which is seen by other players. When Killed, the vehicle can not maneuver nor fire its weapons.

Physical Information:

The M2K M113 Vehicle System consists of the following:

Detector Belts on all four sides of the vehicle.

A Laser Transmitter attached to the barrel of the M2 Machine Gun.

A Control Unit.

A Kill Status Indicator (KSI)

Battery Box Assy.

System Cable

2 IWS

Transit case dimensions: 46.3"L X 40.3"W X 17.5"H (1Kit per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)

Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10,

M2 MG 23-6920-702-10,

M113 TD 9-6920-713-10

Reference Publications:

None

Training Requirements Supported:

(Information not available)

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M1/M1A1/M1A2 KIT

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. The M2K system incorporates a After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, Communications Kill, Mobility Kill, and Catastrophic Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Catastrophic Kill causes continuous flashing which is seen by other players. When a Communication Kill takes place the tanks radio communication ceases. A Mobility Kill disables the tank maneuverability. A catastrophic Kill disables the vehicle completely.

Physical Information:

The M1A1/A2 Vehicle System consists of the following:

1 Universal Laser Transmitter (ULT) w/adaptor for the barrel of the Main Gun

1 Control Unit.

1 Loaders Unit

1 Kill Status Indicator (KSI)

1 Optical Turret Position Detector (OTPD)

1 Battery Box Assy.

1 Coax Mic Assy

Detector Belts LR and RF

1 System Cable

1 Transmitter Cable

1 M240 SAT w/adaptor

! M2 SAT w/adaptor

4 IWS

Transit case dimensions: 46.3"L X 40.3"W X 17.5"H (1Kit per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)

Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10,

M2 MG 23-6920-702-10,

M1A1/A2 TD 9-6920-720-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B, 11Z, 19D, 19E, 19Z

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M2/M3 FAMILY OF FIGHTING VEHICLES KIT

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (CVS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, Communications Kill, Mobility Kill, and Catastrophic Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Catastrophic Kill causes continuous flashing which is seen by other players. When a Communication Kill takes place the vehicle radio communication ceases. A Mobility Kill disables the vehicle maneuverability. A catastrophic Kill disables the vehicle completely.

Physical Information:

The M2/M3 Vehicle System consists of the following:

1 Universal Laser Transmitter (ULT) w/adaptor and Flash WESS for the barrel of the 25mm main gun

1 Control Unit.

1 Kill Status Indicator (KSI)

1 Optical Turret Position Detector (OTPD)

1 Battery Box Assy.

1 Coax Mic Assy

2 TOW Vehicle Simulation Tube

TOW Tube Connector

TOW interface Assy

ATWESS

Shorting Plug Assy

Detector Belts LR and RF

1 System Cable

1 Transmitter Cable

3 IWS

Transit case dimensions: 46.3"L X 40.3"W X 17.5"H (1 Kit per case)

Transit Case for TOW Tubes (2 per Case) 61.6" X 24.7" X 16"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)

9vdc battery (for OTPD)

Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10,

M2/M3 TD 9-6920-720-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B, 11Z, 19D, 19E, 19Z

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) INDEPENDENT TARGET SYSTEM KIT

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (CVS) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, and Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Kill causes continuous flashing which is seen by other players. This Kit can be placed on non-combatant vehicles, bridges, bunkers and ancillary equipment like generators.

Physical Information:

The ITS Kit consists of the following:

- 1 Control Unit.
- 1 KSI w/Adapter
- 1 KSI Post Assy.
- 1 Battery Box Assy.
- 1 Detector Array
- 1 Cable Assy. Dome
- 2 Cable Assy. Power
- 1 Cable Assy ITS

Transit case dimensions: 46.3"L X 40.3"W X 17.5"H (1Kit per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

24vdc

Applicable Publications:

63-6920-701-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) CONTROLLER DEVICE/TRAINING DATA TRANSFER DEVICE (CD/TDTD)

**Training Category/Level Utilized:**

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain.

This device (CD/TDTD) is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. The M2K system incorporates a After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The CD/TDTD is used by Exercise Controllers to control exercises by (1) setting up weapon type and Player ID for each IWS. (2) The CD/TDTD downloads data stored in components of the device (up to 500 events). The CD/TDTD can also fire MILES codes (SELECTABLE) Hit, Near Miss, and Kill. In addition, the device can be used to resurrect/reset any weapon system after it has been "Killed". This component is used to download events from any M2K component, then upload the information into a computer loaded with the MILES After Action Review Software (MAARS) via the

TDTD/PC Interface Device. The computer and MAARS "interpret" and manipulate the data to generate the After Action Report used to present the After Action review to the participants.

Physical Information:

1 Controller Device

Transit case dimensions: 38.7"L X 25"W X 13.5"H

(10 CD/TDTD Kits per case with 2 TDTD/PC Interface Devices)

Equipment Required, Not Supplied:

Computer w/MAARS software.

TDTD/PC Interface Device (Not supplied for each CD/TDTD)

Special Installation Requirements:

None

Power Requirements:

2 AA Batteries

Applicable Publications:

63-6920-703-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B, 11Z, 19D, 19E, 19Z

NSN Unknown

DVC 23-19

**SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER
ENGAGEMENT SYSTEM (MILES) II FOR THE M16A1/M16A2 RIFLE AND M249
SQUAD AUTOMATIC WEAPON (SAW), INSTRUMENTED, NTC/JRTC**

(PICTURE NOT AVAILABLE)

Training Category/Level Utilized:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service, or Agency:

STRICOM

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

(Information not available)

Power Requirements:

(Information not available)

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Applicable Publications:

(Information not available)

Functional Description:

(Information not available)

Reference Publications:

(Information not available)

Physical Information:

(Information not available)

Training Requirements Supported:

(Information not available)

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